



Environmental Fact Sheet

Reducing Marine Vessel and Port Emissions in the South Coast

The Ports of Los Angeles and Long Beach are among the busiest in the world, and emissions from marine vessels are recognized to have a significant impact on ambient air quality in the South Coast Air Basin. The 1990 emissions from marine vessels operating in the South Coast Air Basin have been estimated to be in the range of 30 to 40 tons of oxides of nitrogen (NO_x) per day. Although ocean-going vessels (e.g., container ships, various cargo carriers, tankers) are the largest source of emissions in the marine vessel category, harbor vessels (e.g., tugboats, commercial fishing vessels, crew/supply boats) are also significant contributors. These vessels typically have a useful life of up to thirty years. Because attainment of the National Ambient Air Quality Standards in the South Coast will require reductions from every source of emissions, evaluating options for additional reductions from marine vessels and ports will continue to be necessary for the foreseeable future. Currently, international and national standards for marine diesel engines are under development.

Previous Regulatory Activities

International Maritime Organization

The U.S. Environmental Protection Agency (EPA) has been an active participant in the International Maritime Organization's (IMO's) negotiations of a new Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL

73/78), which will reduce NOx from marine diesel engines. The MARPOL standards are expected to reduce NOx emissions by 30 percent per engine (compared to current engines) and will apply to all engines installed on or after January 1, 2000. These standards will apply to the majority of foreign-flagged ocean-going vessels which stop at the South Coast ports. MARPOL 73/78 prevents EPA from setting lower emission standards for engines on vessels subject to that treaty.

Federal Implementation Plan

EPA's May 1994 Federal Implementation Plan (FIP) proposal included the proposed emission standards set by IMO. Because the IMO standards alone would not achieve the desired reductions, the FIP proposal contained several additional programs. A fee-based incentive program was proposed to accelerate replacement of older engines with newer, cleaner engines. The fee would be reduced for vessels meeting the IMO standards and eliminated for vessels using cleaner engines. The FIP also proposed that all vessels use land-based sources of power ("cold iron") when moored in port. Finally, the FIP recognized some additional reductions from port infrastructure improvements and from reducing the speed of vessels as they approach the port.

Concerned that the proposal would reduce port traffic, the Ports proposed an alternative plan that include some of the FIP proposal elements (i.e., IMO standards, cold ironing of tugs, reducing the speed limit, and infrastructure improvements). However, it dropped the fee-based incentive program and proposed moving the ship traffic from the current 5 miles to 25 miles.

In February 1995, EPA finalized the FIP measure for marine vessels. The FIP included the pending IMO standards, along with measures to reduce speed and cold iron tugs. In addition, EPA committed to consult with the U.S. Navy and U.S. Coast Guard to explore moving the ship traffic; however, these efforts were dropped when the FIP was rescinded by the U.S. Congress in April 1995.

The California Ozone State Implementation Plan

In November 1994, the State of California adopted the 1994 California Ozone State Implementation Plan. Measure M13 - National and International Emission Standards called on EPA to reduce marine emissions by approximately 30 percent from 1990 levels by 2010. The reductions would be achieved from a

combination of the programs proposed in the FIP: IMO standards, moving ship traffic further from shore, reducing speeds, more stringent engine standards for domestic marine engines not subject to IMO, and local measures which encourage cleaner engines or reduced emissions.

**Domestic
Marine Vessels**

In November 1994, EPA proposed new national standards for diesel marine engines on domestic vessels not subject to IMO standards. The proposal consists of two parts. For low and medium sized engines used on ocean-going marine vessels flaggedged in the U.S., the IMO standards would apply. For high speed marine diesel engines used exclusively in U.S. waters, the proposal recommended that a more stringent standard apply to new engines manufactured in 1999 and 2000, depending on size. EPA is awaiting the outcome of the IMO process before it finalizes this rule.

The Public Consultative Process

One of the purposes of the public consultative process is to have all stakeholders work together to identify the best options for achieving further emissions reductions from ports and marine vessels to the extent they are needed for attainment of the ozone health standard in the South Coast. The process will also identify the appropriate parties responsible for adopting and implementing the controls expeditiously.

Public Meetings

A series of public meetings have been scheduled to compliment ongoing processes as well as initiate new discussions on how to reduce emissions from various categories of mobile sources. In October 1996, EPA expects to hold a second public meeting which will include discussion of pending national and international ship controls and begin discussions of innovative approaches for achieving additional reductions. More details on this meeting will be sent out in the next two months.

**Input
Requested**

EPA wants your involvement on this process and would like to hear about any ideas you may have to help make this process a success. We also want to hear about ongoing efforts to look at reducing emissions from ports and marine vessel engines. Please call Julia Barrow at (415) 744-1230 with any comments or questions about the process.